Amendments to the Claims:

1. (original): An implantable medical device comprising:

a housing;

a valve disposed within said housing;

a first pressure sensor disposed within said housing and upstream of said valve;

a second pressure sensor disposed within said housing and downstream of said valve; and

a CPU disposed within said housing and being operatively connected to said first pressure sensor and said second pressure sensor.

2. (original): The device according to claim 1, wherein the CPU is electrically connected to said first pressure sensor and said second pressure sensor.

3. (currently amended): The device according to claim 2, wherein the CPU ~~includes an antenna~~ has means for wirelessly communicating within an external device.

4. (currently amended): The device according to claim 3, wherein the CPU ~~includes a processor~~ has means for calculating a differential pressure between the first pressure sensor and the second pressure sensor.

5. (currently amended): The device according to claim 1, wherein the CPU ~~includes a processor~~ has means for calculating a differential pressure between the first pressure sensor and the second pressure sensor.

6. (original): The device according to claim 1, further comprising a first catheter fluidly connected to said housing, and a third pressure sensor disposed within said first catheter.

7. (original): The device according to claim 6, wherein said third pressure sensor is operatively connected to said CPU.

8. (original): The device according to claim 7, wherein said first catheter is fluidly connected to said housing upstream of said valve.

9. (currently amended): The device according to claim 8, wherein the CPU ~~includes an antenna~~ has means for wirelessly communicating with an external device.

10. (currently amended): The device according to claim 9, wherein the CPU ~~includes a processor~~ has means for calculating a differential pressure between the first pressure sensor and the second pressure sensor, and for calculating a differential pressure between the third pressure sensor and at least one of the first pressure sensor and the second pressure sensor.

11. (original): The device according to claim 10, further comprising a second catheter fluidly connected to said housing, and a fourth pressure sensor disposed within said second catheter.

12. (original): The device according to claim 11, wherein said fourth pressure sensor is electrically connected to said CPU.

13. (original): The device according to claim 12, wherein said second catheter is fluidly connected to said housing downstream of said valve.

14. (currently amended): The device according to claim 13, wherein the CPU ~~includes a processor~~ has means for calculating a differential pressure between the first pressure sensor and the second pressure sensor and for calculating a differential pressure between the fourth pressure sensor and at least one of the first pressure sensor, the second pressure sensor and the third pressure sensor.

15. (currently amended): The device according to claim 1, wherein the CPU ~~is~~ has means for being non-invasively powered using RF.

16. (currently amended): The device according to claim 1, wherein the CPU ~~is~~ has means for being non-invasively powered using acoustics.

17. (currently amended): The device according to claim 1, wherein the CPU ~~is~~ has means for being non-invasively powered using optics.

18. (original): An implantable medical device comprising:

a housing;

a valve disposed within said housing;

a first pressure sensor disposed within said housing and upstream of said valve;

a second pressure sensor disposed within said housing and downstream of said valve; and

a CPU being operatively connected to said first pressure sensor and said second pressure sensor.

19. (original): The implantable medical device according to claim 18, wherein said CPU is disposed within said housing.

20. (original): The implantable medical device according to claim 18, wherein said CPU is disposed external to said housing.

21. (original): A method for diagnosing the performance of an implanted medical device, wherein the implanted medical device has:

a housing;

a valve disposed within said housing;

a first pressure sensor disposed within said housing and upstream of said valve;

a second pressure sensor disposed within said housing and downstream of said valve; and

a CPU disposed within said housing and being operatively connected to said first pressure sensor and said second pressure sensor,

the method comprising the steps of:

comparing the pressure measured by the first pressure sensor to the pressure measured by the second pressure sensor; and

wirelessly communicating the compared pressures to an external device.

22. (original): The method according to claim 21, wherein the device further has a first catheter fluidly connected to said housing, and a third pressure sensor disposed within said first catheter, said method further comprising the steps of:

comparing the pressure measured by the third pressure sensor to one of the pressure measured by the first pressure sensor and second pressure sensor.

23. (original): The method according to claim 22, wherein the device further comprising a second catheter fluidly connected to said housing, and fourth pressure sensor disposed within said second catheter, said method further comprising the step of:

comparing the pressure measured by the fourth pressure sensor to one of the pressure measured by the first pressure sensor, the second pressure sensor and third pressure sensor.

24. (original): A method of diagnosing the performance of an implanted medical device wherein the implanted medical device has:

a housing;

a valve disposed within said housing;

a first pressure sensor disposed within said housing and upstream of said valve;

a second pressure sensor disposed within said housing and downstream of said valve; and

a CPU disposed within said housing and being operatively connected to said first pressure sensor and said second pressure sensor,

the method comprising the steps of:

determining by the CPU, the pressure detected by the first pressure sensor;

determining by the CPU, the pressure detected by the second pressure sensor; and

wirelessly communicating the determined pressures to an external device.

25. (original): An implantable medical device comprising:

a housing;

a valve disposed within said housing;

a differential pressure sensor disposed within said housing ; and

a CPU disposed within said housing and being electrically connected to said differential pressure sensor.

26. (currently amended): The device according to claim 25 wherein the CPU ~~includes an antenna~~ has means for wirelessly communicating within an external device.

27. (original): The device according to claim 25, further comprising a first catheter fluidly connected to said housing, and a second pressure sensor disposed within said first catheter.

28. (original): The device according to claim 27, wherein said second pressure sensor is operatively connected to said CPU.

29. (original): The device according to claim 28, wherein said first catheter is fluidly connected to said housing upstream of said valve.

30. (currently amended): The device according to claim 29, wherein the CPU ~~includes an antenna~~ has means for wirelessly communicating within an external device.

31. (original): The device according to claim 30, further comprising a second catheter fluidly connected to said housing, and a third pressure sensor disposed within said second catheter.

32. (original): The device according to claim 31, wherein said third pressure sensor is operatively connected to said CPU.

33. (original): The device according to claim 32, wherein said second catheter is fluidly connected to said housing downstream of said valve.

34. (currently amended): The device according to claim 25, wherein the CPU ~~is~~ has means for being non-invasively powered using RF.

35. (currently amended): The device according to claim 25, wherein the CPU ~~is~~ has means for being non-invasively powered using acoustics.

36. (currently amended): The device according to claim 25, wherein the CPU ~~is~~ has means for being non-invasively powered using optics.

37. (original): A method of diagnosing the performance of an implanted medical device wherein the implanted medical device has:

a housing;

a valve disposed within said housing;

a differential pressure sensor disposed within said; and

a CPU disposed within said housing and being electrically connected to said differential pressure sensor,

the method comprising the steps of:

determining by the CPU, the pressure detected by the differential pressure sensor; and

wirelessly communicating the determined pressure to an external device.

38. (original): A method for diagnosing the performance of an implanted medical device, wherein the implanted medical device has:

a housing;

a valve disposed within said housing;

a first pressure sensor disposed within said housing and upstream of said valve; and

a second pressure sensor disposed within said housing and downstream of said valve;

the method comprising the steps of:

wirelessly communicating a signal representative of the pressure detected by the first pressure sensor to an external device;

wirelessly communicating a signal representative of the pressure detected by the second pressure sensor to an external device; and

comparing the pressure detected by the first pressure sensor to the pressure detected by the second pressure sensor with the external device.

39. (original): A method for diagnosing the performance of an implanted medical device, wherein the implanted medical device has:

a housing;

a valve disposed within said housing;

a first pressure sensor disposed within said housing and upstream of said valve; and

a second pressure sensor disposed within said housing and downstream of said valve;

the method comprising the steps of:

generating a signal from the first pressure sensor;

generating a signal from the second pressure sensor;

comparing the signals from the first pressure sensor and the second pressure sensor;

generating a signal representative of the difference in pressure between the pressure measured by the first pressure sensor and the pressure measured by the second pressure sensor;

wirelessly communicating the signal representative of the difference in pressure to an external device.

40. (original): An implantable medical device comprising:

a housing;

a valve disposed within said housing;

a first pressure sensor disposed within said housing and upstream of said valve; and

a second pressure sensor disposed within said housing and downstream of said valve.

41. (new): The device according to claim 1, wherein said first pressure sensor and said second pressure sensor are disposed on a common substrate.

42. (new): The device according to claim 41, wherein said CPU is disposed on said common substrate.

43. (new): The device according to claim 18, wherein said first pressure sensor and said second pressure sensor are disposed on a common substrate.

44. (new): The device according to claim 43, wherein said CPU is disposed on said common substrate.

45. (new): The device according to claim 25, wherein said differential pressure sensor and said CPU are disposed on a common substrate.

46. (new): The device according to claim 40, wherein said first pressure sensor and said second pressure sensor are disposed on a common substrate.